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A NEW SPECIES OF MYSIDOPSIS (CRUSTACEA: MYSIDACEA) FROM THE SOUTHEASTERN COAST OF THE UNITED STATES

By Thomas E. Bowman

Until now, only one species of *Mysidopsis*, *M. bigelowi* W. Tattersall (1926), has been recorded from the Atlantic coast of the United States. This species occurs in shallow water from New England to Louisiana, commonly in association with *Metamysidopsis munda* (Zimmer) (W. Tattersall, 1951, p. 142). *Mysidopsis mortenseni* W. Tattersall (1951) was reported from St. Croix, Virgin Islands, and may yet be found in Atlantic coastal waters. Of the remaining twelve species, three are European (Tattersall and Tattersall, 1951); four are known from the southwestern and southern coasts of Africa (Zimmer, 1912; O. Tattersall, 1955); two were reported from the coasts of California and Peru (W. Tattersall, 1932; Coifmann, 1937); two were taken in Indian waters (W. Tattersall, 1922); and one is known from South Georgia, the Falkland Islands, and the adjacent coast of South America (Hansen, 1913; O. Tattersall, 1955).

Mysidopsis furca, new species

Figures 1, 2

Description.—Body slender. Carapace produced anteriorly into bluntly triangular rostrum; anterolateral angles squared; posterior

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FIGURE 1.—*Mysidopsis furca*, new species: *a*, Anterior end, dorsal view, female; *b*, first maxilla, female; *c*, second maxilla, female; *d*, antenna 1, male; *e*, antenna 2, female; *f*, mandible, female; *g*, mandibular palp, female; *h*, fifth thoracic leg, female; *i*, genital appendage, male. *b* and *f*, same scale; *d* and *e*, same scale.

margin emarginate, leaving last two thoracic somites exposed in dorsal view. ABDOMEN tapering very gradually posteriorly, in lateral view usually sigmoid in female, straight or curved downward in single curve in male; first five somites subequal, sixth somite about 1.7 times as long as fifth. EYES rather large, extending beyond lateral margins of carapace; no process on dorsal surface of eyestalk. Peduncle of FIRST ANTENNA more robust in male than in female; male lobe very hirsute, with indentation on medial margin. Scale of SECOND ANTENNA about four times as long as wide, lanceolate, setose all around, with a short distal segment separated by an incomplete suture. MANDIBLE with molar process reduced to a rounded knob bearing a number of minute, blunt setae; incisor process of right mandible with eight teeth, lacinia with six teeth; incisor process of left mandible with nine teeth, lacinia with six teeth; spine row with six spines, the two nearest the molar process shorter and separated from the others. FIRST MAXILLA: Outer plate with eight spines at tip; inner plate bearing two setae, the inner one much longer. SECOND MAXILLA typical for the genus. FIRST THORACIC LEG (maxilliped) with short and stout endopod segments, very similar to that of *M. bigelowi* W. Tattersall. Endopod of SECOND THORACIC LEG stout; fifth segment 1.6 times as long as sixth; seventh segment about half as long as sixth, ending in a strong claw longer than the segment. Endopods of REMAINING LEGS characteristic for the genus. PLEOPODS of male with quadrangular lobes at the bases of the endopods; each lobe bearing five spines, four of them with bulbous bases; exopod of fourth pleopod as long as endopod, ending in a very strong spine. GENITAL APPENDAGE of male eighth thoracic leg blunt, subquadrangular, armed at the tip with two long naked setae and two shorter, more slender, plumose setae. UROPOD: Outer ramus five times as long as broad; outer margin straight; inner margin convex. Inner ramus five-sixths as long as outer ramus, tapering distally; inner margin armed with 35–40 longer and shorter spines from the level of the statocyst nearly to the distal end. TELSON very distinctive, especially in female. In female it is slightly longer than wide, bearing about 10 short spines on the concave lateral margin; distal end bearing two pairs of long, heavy spines, the outer pair curved inward, the inner pair straight, about half the length of the telson. Distal end with shallow concavity between the inner pair of spines. Male telson three-fourths as wide as long; lateral margins less concave than in female; inner pair of distal spines only about one-fifth the length of the telson; outer pair about half as long as inner pair.

LENGTH.—Measured from tip of rostrum to end of distal spines of telson: Females, 4.6–5.8 mm.; males, 4.7–6.1 mm.

COLOR.—In preserved specimens pigment is absent from the dorsal surface except for a single pair of chromatophores at the base of the

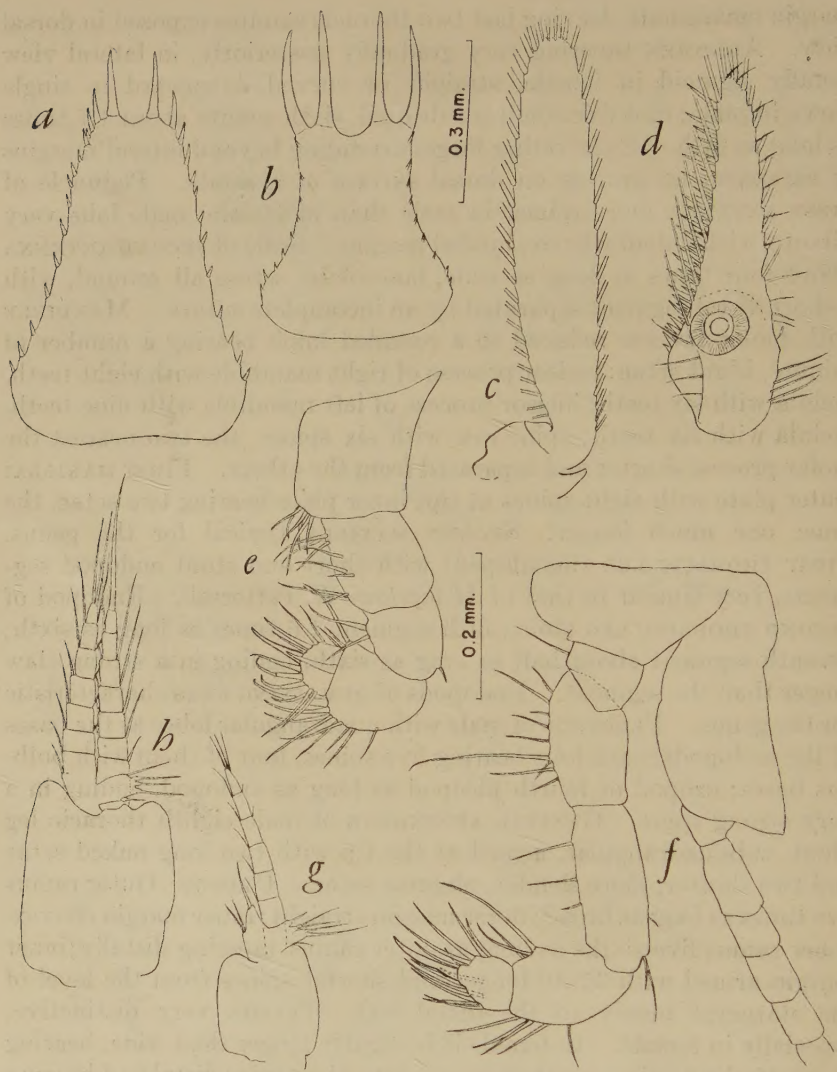

FIGURE 2.—*Mysidopsis furca*, new species: *a*, Telson, male; *b*, telson, female; *c*, outer ramus of uropod, female; *d*, inner ramus of uropod, female; *e*, first thoracic leg (maxilliped), female; *f*, second thoracic leg, female; *g*, first pleopod, male; *h*, fourth pleopod, male. *a–d*, *g–h*, same scale; *e–f*, same scale.

telson. One chromatophore is present on the midventral surface of each of the first five abdominal somites. On the ventral surface of the thorax are two pairs, and a single median chromatophore lies anterior to them. A single chromatophore is present on the base of each posterior oostegite.

TYPES.—Holotype, female with fully developed oostegites, 5.6 mm. in length, USNM 99219; allotype, male, 6.1 mm., USNM 99220; and 21 paratypes, all from *Theodore N. Gill* cruise 2, station 57, 33°33.7′ N., 78°24.6′ W., off North Inlet, S. C., May 8, 1953, depth of water, 20.1 meters.

REMARKS.—*M. furca* can readily be distinguished from other species of *Mysidopsis* by the shape and armature of the telson. In some of the other species of *Mysidopsis* the apical spines are abruptly longer than the lateral spines, but in none of them except *M. acuta* is the inner uropod armed with spines along most of the length of its inner margin. *M. bigelowi* has only five spines in the region of the statocyst and further differs from *M. furca* in the very robust second thoracic legs. In *M. kempi* W. Tattersall, from the Gulf of Manar, the inner margin of the inner uropod has 10 spines, all in the region of the statocyst. *M. didelphys* (Norman) has one long spine near the statocyst. The telson of *M. acuta* is about twice as long as wide, and the scale of the second antenna is very narrow (about five times as long as broad) and sharply pointed.

In none of the other species of *Mysidopsis* are the apical spines of the telson as strongly developed as in the female *M. furca*. The sexual dimorphism of the telson found in the new species is most unusual, and, to my knowledge, unique among mysids.

The specific name is taken from the Latin noun, "furca," a pitchfork, and refers to the appearance of the female telson.

The following key, taken mostly from the literature, is offered here with the hope that it will facilitate identification of specimens of *Mysidopsis*.

Key to the species of *Mysidopsis*

1. Inner margin of inner uropod bearing none or a few (1–10) spines limited to the region of the statocyst 2
   Inner margin of inner uropod with many (24–75) closely packed spines extending along much of the margin 8
2. Distal spines of telson abruptly longer than lateral spines 3
   Distal spines of telson as long as or only slightly longer than lateral spines. 4
3. Inner uropod with 5 spines on inner margin; second thoracic leg strongly developed . . . . . **bigelowi** W. Tattersall
   Inner uropod with 10 spines on inner margin; second thoracic leg normally developed . . . . . **kempi** W. Tattersall

4. Inner uropod without spines on inner margin . . . . . **inermis** Coifmann
   Inner margin of inner uropod with one spine on inner margin 5
   Inner uropod with 5 spines on inner margin; carapace with 2 humps on dorsal surface 7
5. Telson about 1.1 times as long as wide; 2 spines on each lateral margin. **indica** W. Tattersall
   Telson 1.4–1.6 times as long as wide; 8–20 spines on each lateral margin . 6
6. Apex of telson truncate . . . . . **didelphys** (Norman)
   Apex of telson with small V-shaped notch . . . . . **angusta** Sars
7. Dorsal part of first abdominal somite produced posteriorly into a broad, rounded process . . . . . **camelina** O. Tattersall
   Dorsal part of first abdominal somite not produced posteriorly . **gibbosa** Sars
8. Distal spines of telson abruptly longer than lateral spines 9
   Distal spines of telson as long as or only slightly longer than lateral spines. 10
9. Distal spines of female telson about half as long as telson. **furca**, new species
   Distal spines of telson about one-eighth as long as telson . . **acuta** Hansen
10. Scale of second antenna lanceolate, 6.5–9 times as long as wide 11
    Scale of second antenna oval, about 3.5 times as long as wide 13
11. Rostrum very short, broadly rounded . . . . . **californica** W. Tattersall
    Rostrum pointed 12
12. Spines of inner endopod more spaced, reaching to apex; rostrum not reaching distal end of first segment of peduncle of antenna 2 . **schultzei** (Zimmer)
    Spines of inner uropod very dense, extending along about seven-eighths of its total length. Rostrum acute, reaching distal end of first segment of peduncle of antenna 2 . . . . . **major** (Zimmer)
13. Spines of inner endopod usually extending only to about middle of endopod; telson nearly twice as long as wide . . . . . **similis** (Zimmer)
    Spines of inner endopod extend nearly to distal end; telson about 1.5 times as long as wide . . . . . **mortenseni** W. Tattersall

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